UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: 10/17/90

SUBJECT: REQUEST FOR REMOVAL ASSESSMENT FRANKLIN PLASTICS AND ELIZABETH COAL GAS SITES

FROM: DENNIS SANTELLA, CHIEF
TECHNICAL AND PRE-REMEDIAL SUPPORT SECTION

TO: RICHARD SALKIE, ASSOCIATE DIRECTOR
REMOVAL PROGRAMS

Attached is a memo from Roland Hemmett requesting that we consider whether a removal action is warranted at the above named sites. The memo indicates that high soil concentrations of lead and plasticizers at Franklin Plastics site may present a hazard both to workers and nearby residents. We will contact OSHA and ask them to investigate. The memo also expresses concern over high levels of organic coal tar wastes and chromium at the former Elizabeth Coal Gas site #2. There is a baseball diamond on the site which raises concern over the exposure of children to these contaminants.

Please contact Kate Donnelly at FTS 340 6704 for a copy of the Site Investigation reports. Please have one of your staff review the material and determine whether removal action(s) are warranted.

cc: V. Pitruzzello, ERRD
R. Hemmett, ESD
K. Donnelly, ESD
J. Davila, ERRD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: OCT 11 1990

SUBJECT: Referrals of the Franklin Plastics Corp. Site (NJD 011121589) and the Elizabeth Coal Gas Site #2 (NJD 981082902)

FROM: Roland B. Hemmett, Acting Chief RB Hemmett
Surveillance and Monitoring Branch

TO:
Vince Pitruzzello, Chief
Program Support Branch

On October 10, 1990, FIT 2 (NUS Corp.) submitted two Site Inspection reports for the Franklin Plastics Corp. site located at 113 Passaic Ave., in Kearny, NJ and the Elizabeth Coal Gas Site #2, located at 406 South St., in Elizabeth, NJ. Site maps specifying the exact locations are attached. The resulting reports will be forwarded to your branch under separate cover when they are finalized. Both sites are located in industrial urban areas where neither groundwater nor surface water are used as drinking water sources. Nevertheless, at both sites, high concentrations of various contaminants in on-site soils pose a significant risk of direct contact. Upon our initial review, it appears that both of these sites are excellent candidates for removal assessments, as explained below.

First, at Franklin Plastics data resulting from both the NUS site inspection and an ongoing ECRA investigation show very high levels of semi-volatile organics and metals, among other parameters. For example in on-site soils, Bis (2-ethylhexyl) phthalate was detected at 26,000,000 ppb, Butylbenzl phthalate was detected at 16,000,000 ppb, and lead was detected at 2,520 ppm E (estimated). I have attached four data tables from the report which depict the wide range of contamination. Contaminant concentrations in the soil are so high that nearby residents could be at risk by both the direct contact and air routes. Another point of interest is that this facility is currently active (as a "compounder" of PVC pellets) and employees are potentially subject to risks beyond the limits set by OSHA; therefore, OSHA should be notified.

In contrast, the Elizabeth Coal Gas Site #2 is an inactive former coal gasification plant. Samples collected by NUS as part of the inspection revealed high concentrations of contaminants attributable to coal gas manufacturing wastes. For example, 2-Methylnaphthalene was detected at a level of 3,300,000 E ppb, Benzene was detected at 82,000 E ppb, and chromium was detected at 489 ppm. Pertinent data tables are attached. One of the more troubling aspects of this site is that it encompasses a baseball diamond used by neighborhood children. Action, to at least minimize access to the site, seems appropriate.

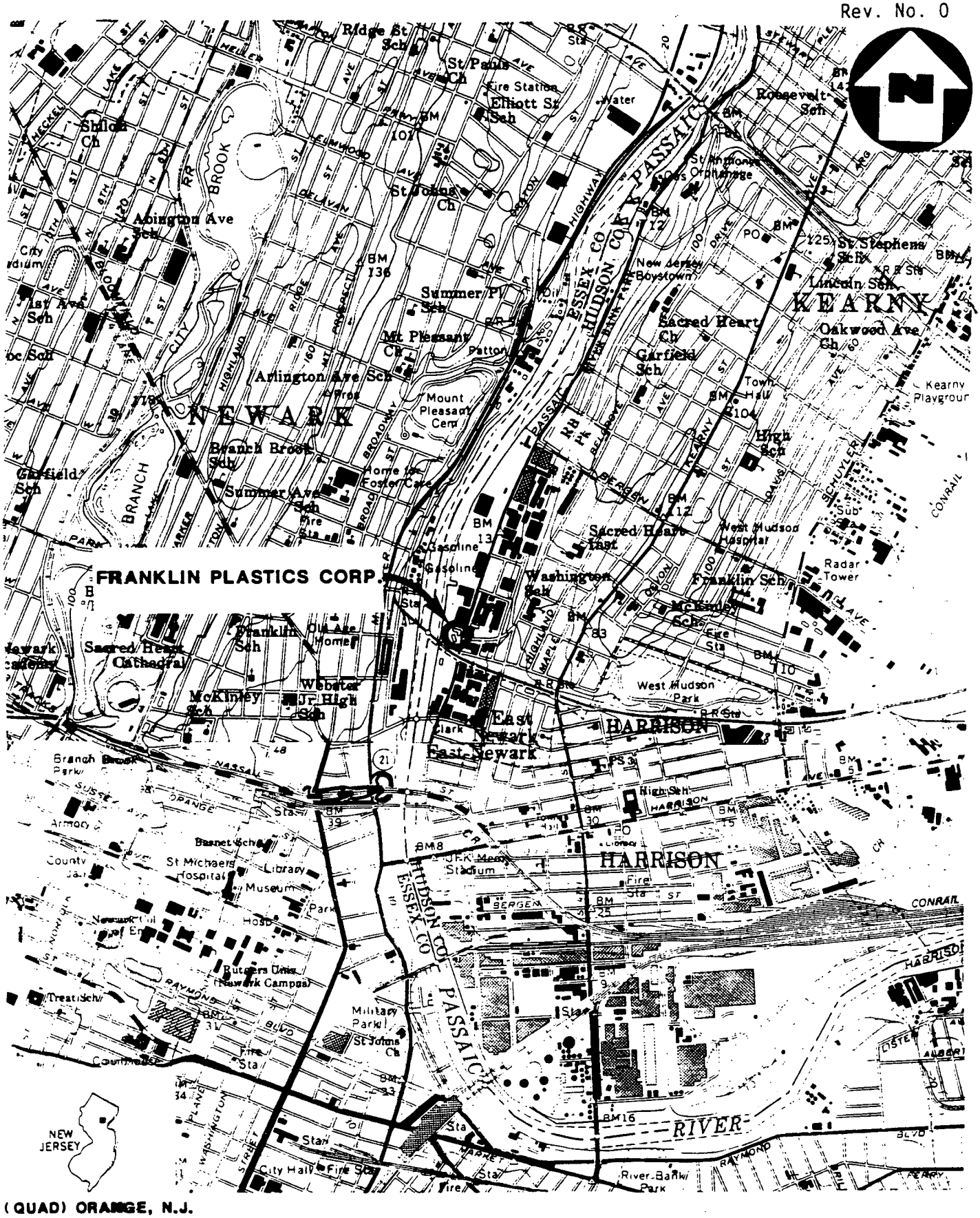
For both of these sites, utilization of FASP equipment could provide analytical services which could meet the central objective for these sites: to determine the extent of soil contamination, allowing for an adequate removal.

The indicator contaminants for both sites are semi-volatiles and metals, which could be analyzed by the XRF and TCMS, respectively. Also the FTIR could possibly used at the Franklin Plastics site to check for a release of volatile contaminants to the air.

Please contact Kate Donnelly of my staff at FTS 340-6704 if we can be of any further assistance. She can provide additional copies of the report upon request.

Attachments

cc: K. Donnelly, ESD w/o attachment
A. Brochu, ESD w/o attachment
P. Boone, ESD w/attachment
R. Salkie, ERRD w/attachment
D. Santella, ERRD w/attachment
R. Naman, FIT2 w/o attachment



(QUAD) ORANGE, N.J.

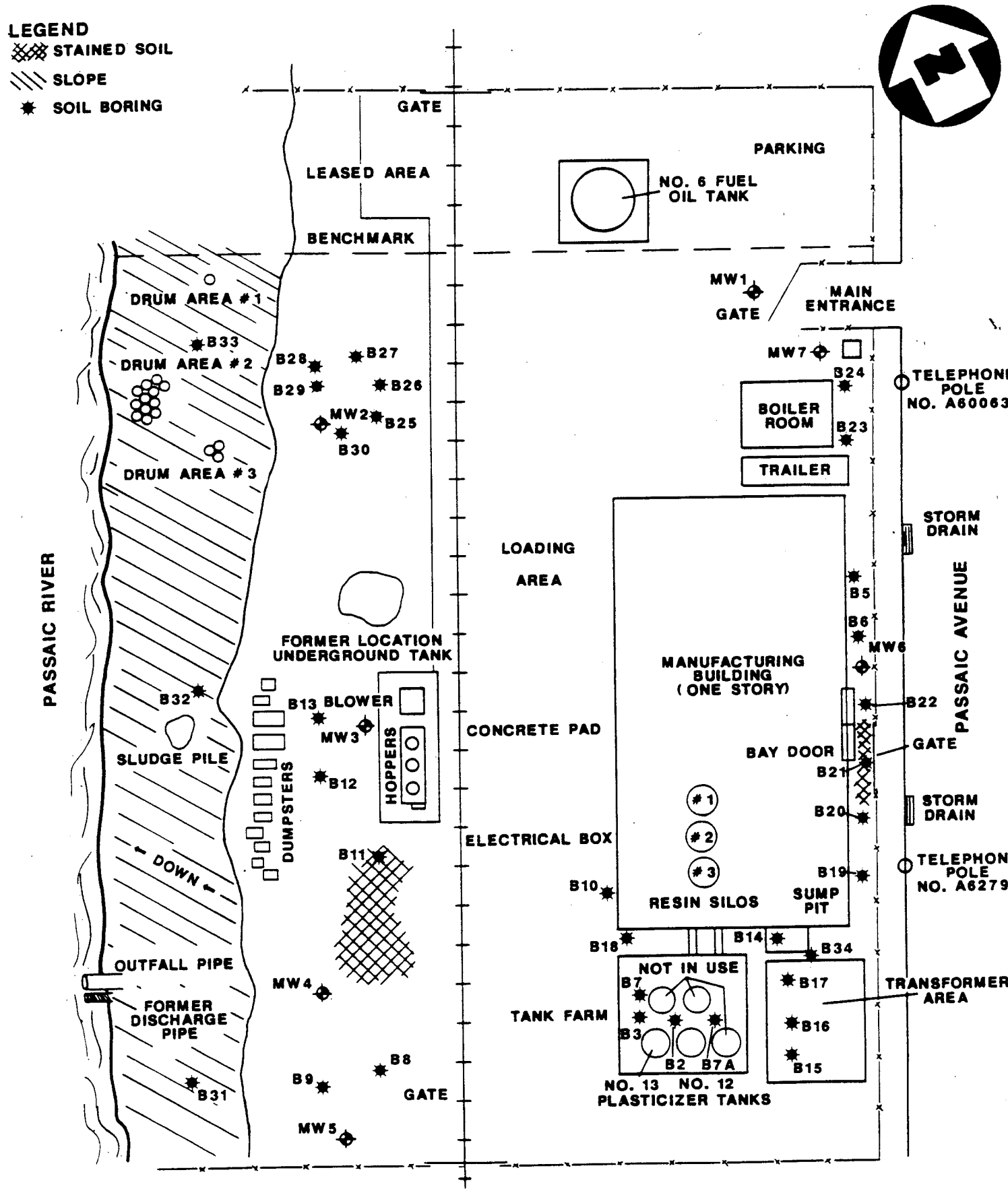
FIGURE 1

SITE LOCATION MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

SCALE: 1"= 2000'

NUS CORPORATION



SAMPLE LOCATION MAP - JULY 1987

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 3

NUS CORPORATION

TABLE 1: COMPOUNDS DETECTED IN GROUNDWATER - JUNE 1987

Compounds	MW1	MW2	MW3	MW4	MW5	MW6	MW7
Acenaphthene	---	---	---	BLRL	---	---	---
Aroclor-1242	---	---	15	---	---	---	---
Bis(2-ethylhexyl) phthalate	21	BLRL	20	130	32	BLRL	BLRL
BenzoFluoranthene	BLRL	---	---	---	---	---	---
Chloroethane	---	---	---	---	13	---	---
Chrysene	BLRL	---	---	---	---	---	---
Di-n-butyl phthalate	---	---	---	---	BLRL	---	---
Fluorene	---	---	---	---	---	---	---
2-Methylnaphthalene	BLRL	---	---	BLRL	---	---	---
Naphthalene	BLRL	---	---	---	---	---	---
Pentachlorophenol	---	---	---	---	---	---	---
Arsenic	---	---	BLRL	BLRL	---	---	---
Copper	---	---	---	---	12	---	---
Lead	21	13	34	---	360	---	5.3
Mercury	---	---	0.3	---	83	---	---
Zinc	120	---	---	---	---	---	16
					280		

Note:

All data are reported in micrograms per liter (ug/L).
--- - Denotes not detected.
MW - Monitoring Well
BLRL - Detected below laboratory reporting limit.

(Ref. No 13)

TABLE 2: SUMMARY OF ORGANIC COMPOUNDS DETECTED IN SOILS - JULY 1987

Compounds	Sample Location(s) Where Compounds Detected	Sample(s) With Highest Concentration	Highest Concentration (ug/kg)
Acetone	MW3, MW7, B5, B31	MW7	4,000††
Benzene	MW3, MW4, MW5, B9 B11, B31, B32	MW3	130
Benzo Fluoranthene	B31	B31	990
Bis(2-ethylhexyl) phthalate	MW3, MW4, MW5, B1, B2† B3†, B7, B8, B9, B10, B11, B12, B13, B31, B32, B33	B10	26,000,000
Butylbenzyl phthalate	MW3, MW4, B8, B10 B31, B32, B33	MW3	220,000
Di-n-butyl phthalate	B2†, B3†	B3	301,000
1,1-Dichloroethene	MW1, MW3, B5, B11, B31, B32	MW3 B32	140
Di-n-octyl phthalate	MW3, MW4, B2, B3 B8, B9, B10, B13	B8	1,000,000
Fluoranthene	MW5, B9, B10, B31, B32, B33	MW5	29,000
Methylene Chloride	MW1, MW3, MW7, B5†, B31, B32†, B33†	MW7	4,600
N-Nitrosodiphenylamine	B12	B12	10,000
Phenanthrene	MW5, B9, B10, B11, B12 B13, B31, B32, B33	B10	19,000
Tetrachloroethane	MW1	MW1	140
Toluene	MW4, MW5 B8, B9	B8	290
1,1,1-Trichloroethane	MW5, B8, B9	MW5	450
Xylenes	MW4, MW5, B8	MW4	550

Notes:

All data are reported in micrograms per kilogram(ug/kg).
B - Soil boring
MW - Core soil sample collected during installation of monitoring well.
† - Analyte found in method blank.
†† - Detected below laboratory reporting limit.
(Ref. No. 13)

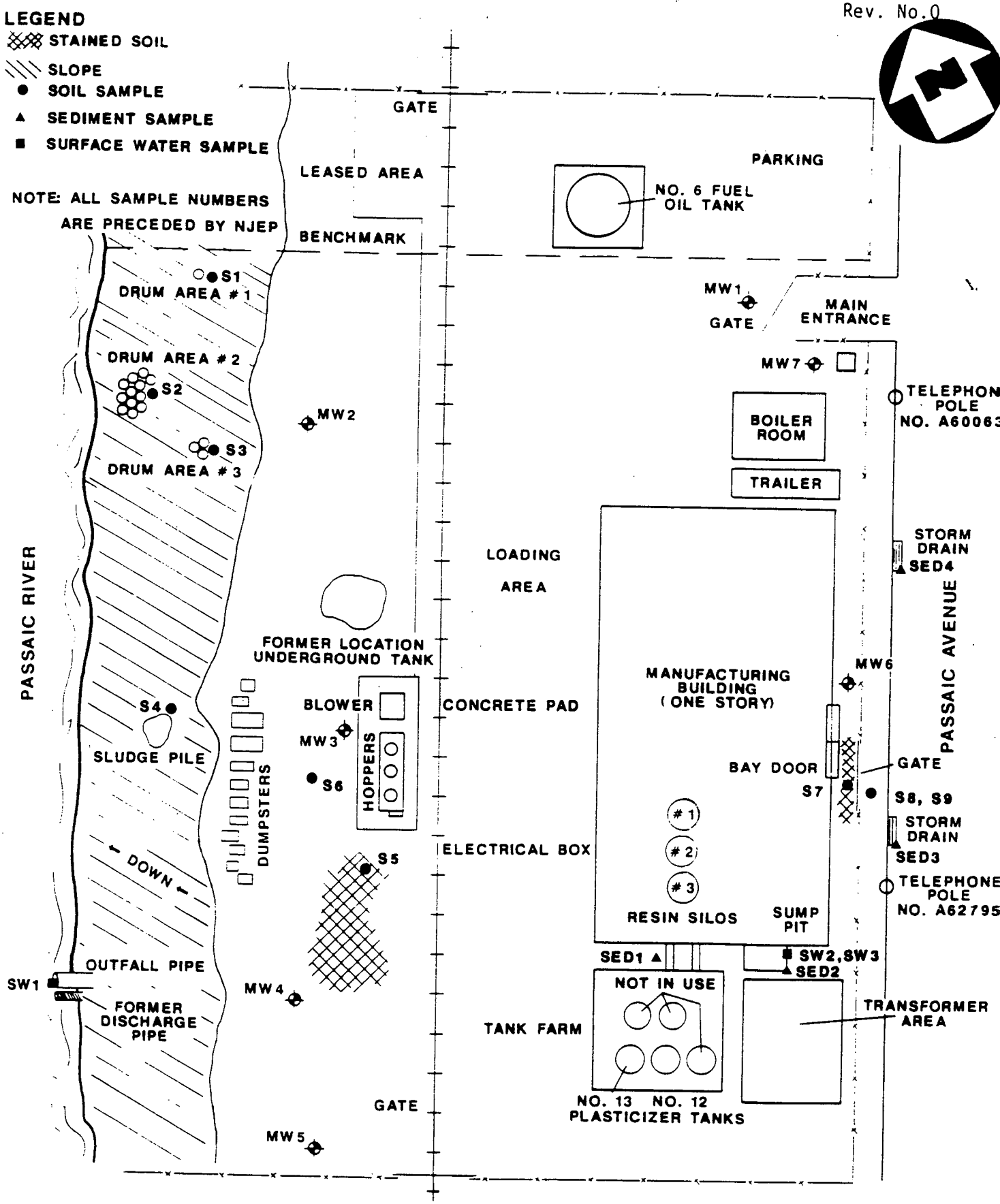
Table 3: INORGANIC SUBSTANCES DETECTED IN SOILS - JULY 1987

Substances	Sample Location(s) Where Substances Detected	Sample(s) With Highest Concentration	Highest Concentration (ug/kg)
Antimony	MW1, MW3, MW4, MW5, MW6 B6, B12, B31, B32, B33	B31	2,350,000
Arsenic	B6, B7	B7	1,300,000
Beryllium	MW6, B6, B32, B33	B32, B33	1,700
Cadmium	MW1, MW3, MW4, MW5, MW6, MW7, B3, B5, B6, B7, B8, B10, B11, B12, B31, B32, B33	B12	563,000
Chromium	B7, B33	B33	145,000
Copper	MW1, MW4, MW7, B10, B33	B33	2,070,000
Lead	MW1, MW4, MW6, MW7, B2 B5,B6, B7, B8, B9, B10, B31, B32, B33	B10	2,150,000
Mercury	B7, B10, B32	B10	4,800
Silver	B7	B7	7,300
Thallium	B5, B8, B12	B5	27,000
Zinc	MW1, MW7, B5, B7, B8, B12, B32, B33	B7	3,020,000

Notes:

All data are reported in micrograms per kilogram (ug/kg).
B - Soil boring
MW - Core soil sample collected during installation of monitoring well.

(Ref. No. 13)



SAMPLE LOCATION MAP

FRANKLIN PLASTICS CORP., KEARNY, N.J.

NOT TO SCALE

FIGURE 4

NUS CORPORATION

SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA

VOLATILES

Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1
Percent Moisture	--	--	--	33	58	19	28	9	8	27	7
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone	J										
Carbon Disulfide	J										
1,1-Dichloroethene											
1,1-Dichloroethane											
Trans-1,2-Dichloroethene (total)											
Chloroform											
1,2-Dichloroethane	14	14	13								
2-Butanone											
1,1,1-Trichloroethane				29 E							
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane	J	J	J								
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
Bromoform											
4-Methyl-2-Pentanone											
2-Hexanone											
Tetrachloroethene				30							
Toluene											
1,1,2,2-Tetrachloroethane											
Chlorobenzene											
Ethylbenzene											
Styrene											
Xylenes (Total)					J						
					36						

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
T - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

VOLATILES	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Sample ID No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Traffic Report No.	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Matrix	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Units	1	1	1	1	1	1	1	1	1	1	1
Dilution Factor	7	20	20	9	6	--	--	--	--	--	--
Percent Moisture											
Chloromethane											
Bromomethane											
Vinyl Chloride						J	J		J	J	
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide		J								J	
1,1-Dichloroethene											
1,1-Dichloroethane											
Trans-1,2-Dichloroethene (total)											
Chloroform											
1,2-Dichloroethane											
2-Butanone						J	J	J	J	J	J
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene								J			
trans-1,3-Dichloropropene											
Bromoform											
4-Methyl-2-Pentanone											
2-Hexanone											
Tetrachloroethene											
Toluene											
1,1,2,2-Tetrachloroethane											
Chlorobenzene											
Ethylbenzene											
Styrene											
Xylenes (Total)											

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Sample ID No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Traffic Report No.	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Matrix	ug/L	ug/L	ug/L	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Units	1	1	1	1(MED)	13	7.2	7.2	1	1(MED)	1(MED)	10(MED)
Dilution Factor/GPC Cleanup (Y)	--	--	--	33	58	19	28	9	8	27	7
Percent Moisture											
Phenol											
bis(2-Chloroethyl)ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
bis(2-Chloroisopropyl)ether											
4-Methylphenol											
N-Nitroso-di-n-dipropylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic acid									R	R	
bis(2-Chloroethoxy)methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											
Hexachlorobutadiene											
4-Chloro-3-Methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
2,6-Dinitrotoluene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenyl ether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-methylphenol											
N-nitrosodiphenylamine											
4-Bromophenyl-phenyl ether											
Hexachlorobenzene											

J J

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J

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J

J J J

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Sample ID No.	BDP54	BDP55	BDP56	BDP57	BDP58	BDP59	BDP60	BDP61	BDP62	BDP63	BDP64
Traffic Report No.	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Matrix	ug/l	ug/l	ug/l	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Units	1	1	1	1(MED)	13	7.2	7.2	1	1(MED)	1(MED)	10(MED)
Dilution Factor/GPC Cleanup (Y)	--	--	--	33	58	19	28	9	8	27	7
Percent Moisture											
Pentachlorophenol											
Phenanthrene				J	J	15000	4400	J			
Anthracene					J	2900	J	J			
Di-n-butylphthalate					J	J	J	500	31000	J	J
Fluoranthene				J	27000	19000	5600	J			
Pyrene				J	25000	18000	7000	J			
Butylbenzylphthalate				38000	470000 E	370000	710000	20000	11000000	410000	16000000
3,3'-Dichlorobenzidine											
Benzo(a)anthracene				J	J	8000	J	J			
Chrysene				J	17000	13000	3500	J			
bis(2-Ethylhexyl)phthalate				190000	13000000	1500000	1000000	1700	110000	J	J
Di-n-octylphthalate				J	800000	37000	48000	J			
Benzo(b)fluoranthene				JN	16000 EN	9500	4000 EN	JN			
Benzo(k)fluoranthene						8300 E					
Benzo(a)pyrene				J	J	7500	J	J			
Indeno(1,2,3-cd)pyrene				J	J	4000	J	J			
Dibenz(a,h)anthracene					J	J	J				
Benzo(g,h,i)perylene				J	J	3600	J	J			

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES	NJEP-S5	NJEP-S6(MS/MSD)	NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Sample ID No.	BDP65	BDP66	BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Traffic Report No.											
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	10(MED)	7.8	3(MED)	1	1	1	1	1	1	1	N/A
Percent Moisture	7	20	20	9	6	--	--	--	--	--	N/A
Phenol											NR
bis(2-Chloroethyl)ether											NR
2-Chlorophenol											NR
1,3-Dichlorobenzene											NR
1,4-Dichlorobenzene											NR
Benzyl alcohol											NR
1,2-Dichlorobenzene											NR
2-Methylphenol											NR
bis(2-Chloroisopropyl)ether											NR
4-Methylphenol											NR
N-Nitroso-di-n-dipropylamine											NR
Hexachloroethane											NR
Nitrobenzene											NR
Isophorone											NR
2-Nitrophenol											NR
2,4-Dimethylphenol											NR
Benzoic acid											NR
bis(2-Chloroethoxy)methane											NR
2,4-Dichlorophenol											NR
1,2,4-Trichlorobenzene											NR
Naphthalene											NR
4-Chloroaniline		J									NR
Hexachlorobutadiene				560	J						NR
4-Chloro-3-Methylphenol											NR
2-Methylnaphthalene											NR
Hexachlorocyclopentadiene											NR
2,4,6-Trichlorophenol				J	J						NR
2,4,5-Trichlorophenol											NR
2-Chloronaphthalene											NR
2-Nitroaniline											NR
Dimethylphthalate											NR
Acenaphthylene											NR
2,6-Dinitrotoluene											NR
3-Nitroaniline				J							NR
Acenaphthene											NR
2,4-Dinitrophenol		J		520							NR
4-Nitrophenol											NR
Dibenzofuran											NR
2,4-Dinitrotoluene		J		430							NR
Diethylphthalate											NR
4-Chlorophenyl-phenyl ether											NR
Fluorene											NR
4-Nitroaniline		J		530	J						NR
4,6-Dinitro-2-methylphenol											NR
N-nitrosodiphenylamine											NR
4-Bromophenyl-phenyl ether											NR
Hexachlorobenzene											NR

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204 LAB: COMPUCHEM

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

SEMI-VOLATILES	NJEP-S5	NJEP-S6(MS/MSD)		NJEP-S7	NJEP-S8	NJEP-S9(DUP)	NJEP-RIN1	NJEP-RIN2	NJEP-RIN3	NJEP-RIN4	NJEP-RIN5	NJEP-TBLK1
Sample ID No.	BDP65	BDP66		BDP67	BDP68	BDP69	BDP70	BDP71	BDP72	BDP73	BDP75	BDP74
Traffic Report No.	SOIL	SOIL		SOIL	SOIL	SOIL	WATER	WATER	WATER	WATER	WATER	WATER
Matrix	ug/kg	ug/kg		ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Units	10(MED)	7.8		3(MED)	1	1	1	1	1	1	1	N/A
Dilution Factor/GPC Cleanup (Y)	7	20		20	9	6	--	--	--	--	--	N/A
Percent Moisture												
Pentachlorophenol												NR
Phenanthrene		5000			4600	1300						NR
Anthracene		J			810	J						NR
Di-n-butylphthalate		J			J	J						NR
Fluoranthene		6000		J	4900	1900						NR
Pyrene		4700		J	3500	1400						NR
Butylbenzylphthalate	J	690000		170000	19000	14000						NR
3,3'-Dichlorobenzidine												NR
Benzo(a)anthracene		J			2000	830						NR
Chrysene		J		J	2600	1200						NR
bis(2-Ethylhexyl)phthalate	J	840000		1600000	240000	190000						NR
Di-n-octylphthalate		78000		J	3600	4100						NR
Benzo(b)fluoranthene		5100	EN	JN	3600	EN 1600	EN					NR
Benzo(k)fluoranthene												NR
Benzo(a)pyrene		J			1500	610						NR
Indeno(1,2,3-cd)pyrene		J			960	450						NR
Dibenz(a,h)anthracene		J			440	J						NR
Benzo(g,h,i)perylene		J			870	380						NR

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: FRANKLIN PLASTICS CORPORATION
TDD#: 02-9002-24
SAMPLING DATE: 6/5/90
EPA CASE NO.: 14204
LAB NAME: VEGAS ANALYTICAL

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

INORGANICS

Sample ID No.	NJEP-SW1(MS/MSD)	NJEP-SW2	NJEP-SW3(DUP)	NJEP-SED1	NJEP-SED2	NJEP-SED3	NJEP-SED4	NJEP-S1	NJEP-S2	NJEP-S3	NJEP-S4
Traffic Report No.	MBCN75	MBCN76	MBCN77	MBCN78	MBCN79	MBCN80	MBCN81	MBCN82	MBCN83	MBCN84	MBCN85
Matrix	WATER	WATER	WATER	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL
Units	ug/L	ug/L	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum				3610	4040 E	5180	4640	9690	624	5970	1150
Antimony	J	J		27.2 E	49 E	J	J				J
Arsenic	J	J	J	J	68 E	8	26.7 E	12.5	J	3.2	J
Barium				338	1010 E	143	130	108	133	358	59.3
Beryllium					17.5 E						
Cadmium	12.2	12	13.1	29.2	202 E	5	5.7	1.8	29.2	2.5	2.9
Calcium	15500	15100	15000	9090	22600 E	14200	20500	4080	201000	59500	187000
Chromium				79.1	55.6 E	71.3	48.9	41.3	76.5	51.2	44
Cobalt			J	J	J	J	J	27.3	J	J	J
Copper	28.8	38.7	41.9	327	3280 E	227	103	162	23.5	81.8	21.8
Iron	171	176	175	9060	217000 E	41000	17400	140000	15200	15000	5080
Lead	3.4	4.4 E	18.7 E	280	818 E	596	644 E	70	299	191	133
Magnesium	J	J	J	2350	4890 E	6190	6430	6320	15100	9910	32500
Manganese	23.9	29.2	25	76.8	3980 E	273	160	798	158	244	85.6
Mercury				0.31	0.25 E	0.44	0.33	0.17	0.16	0.25	0.1
Nickel				36 E	39.8 E	38.9 E	33.6 E	58.7	45.7	92.5	40.5
Potassium	J	J	J	J	J	J	J	3090	J	J	J
Selenium					5.1 E	J	J				
Silver						J					
Sodium	9670	9490	9510	R	R	R	R	R	36.9 R	R	R
Thallium											
Vanadium											
Zinc	22.5	24.2	35	20.9 747	2800 E 759 E	33.7 E 731	30.6 E 313	36.4 E 133	21.7 78.8	32.9 E 135	J 6.9

NOTES:

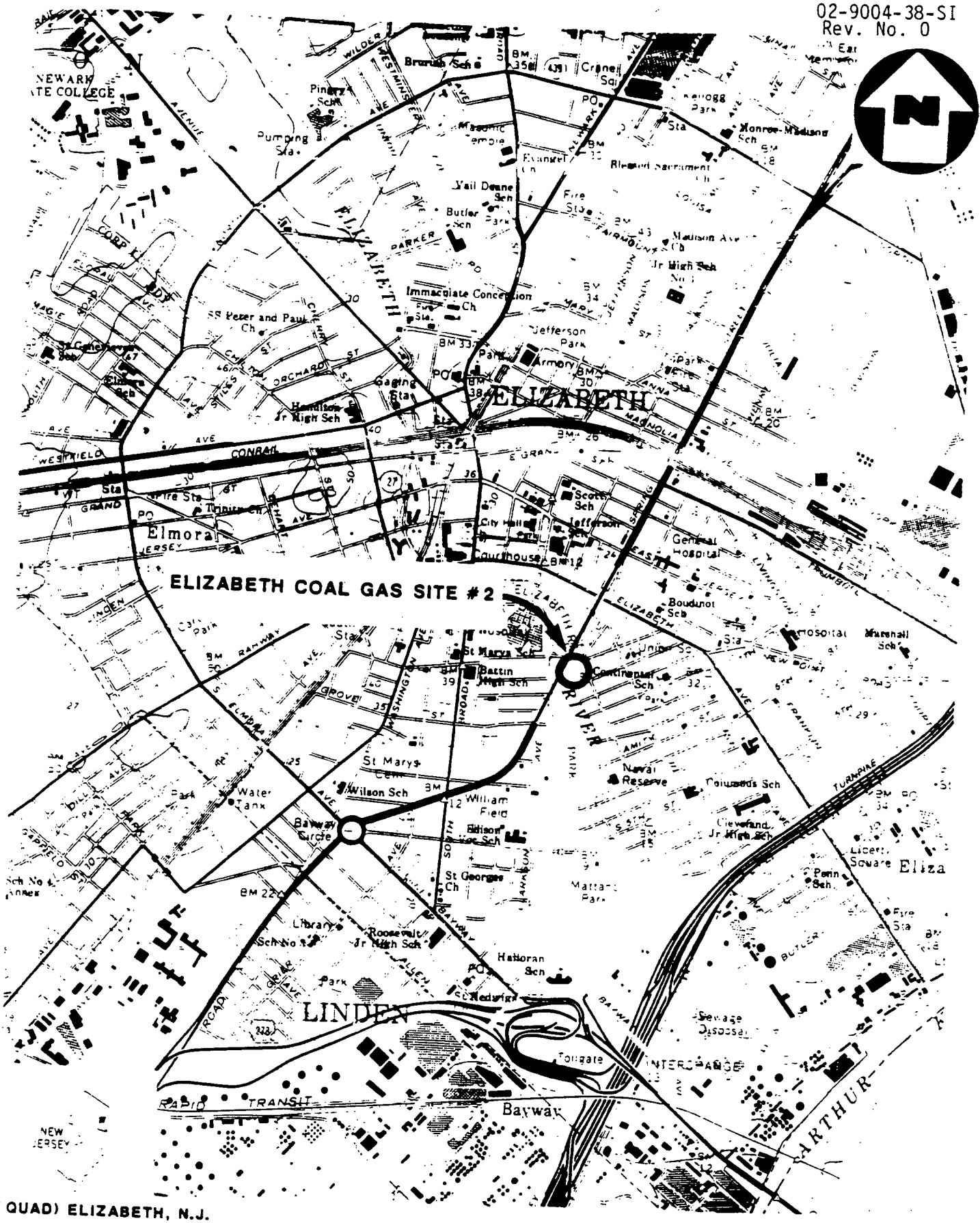
Blank space - compound analyzed for but not detected
J - estimated value
E - estimated value, compound present below CRDL but above IDL
R - analysis did not pass EPA QA/QC
- - analysis not required

PLASTICS CORPORATION
02-9002-24
ING DATE: 6/5/90
SE NO.: 14204
ME: VEGAS ANALYTICAL

TABLE 4
SUMMARY OF SITE INSPECTION ANALYTICAL DATA
(cont'd)

NICS ID No. / Report No.	NJEP-S5 MBCN86 SOIL ug/kg	NJEP-S6(MS/MSD) MBCN87 SOIL ug/kg	NJEP-S7 MBCN88 SOIL ug/kg	NJEP-S8 MBCN89 SOIL ug/kg	NJEP-S9(DUP) MBCN90 SOIL ug/kg	NJEP-RIN1 MBCN91 WATER ug/L	NJEP-RIN2 MBCN92 WATER ug/L	NJEP-RIN3 MBCN93 WATER ug/L	NJEP-RIN4 MBCN94 WATER ug/L	NJEP-RIN5 MBCN95 WATER ug/L	NJEP-TBLK1 N/A N/A ug/L
	1070 J	7450 87.7 E	1710 J	7410	6280						NR
	2.6	14	5.8	6.6	12						NR
	144	1990	106	140	116						NR
	55.5	78.2	5.3	1.4	1.1						NR
	189000	39400	140000	3550	3830	J	J				NR
	55.9 J	38.4 J	279 J	15.8 J	14.5 J			19.5		J	NR
	23.4	112	103	56.3	54.4						NR
	4960	14700	8210	12900	10800			J		J	NR
	348	2520 E	1430 E	204	90.8						NR
	9080	3970	27300	2340	2250			J		J	NR
	103	292	140	337	340						NR
	0.2	0.12		0.16	0.11					0.2	NR
	16.3 E J	28.4 E J	134 J J	13.4 E J	12 E J						NR
	R	R	R	R	R	J	J	J	J	R	NR
	13.3	41.4 E	31.3 E	23.8 E	21.3 E						NR
	115	878	1010	259	301	J			J	J	NR

compound analyzed for but
ected
ed value
ed value, compound present
DL but above IDL
did not pass EPA QA/QC
s not required



(QUAD) ELIZABETH, N.J.

SITE LOCATION MAP

ELIZABETH COAL GAS SITE #2, ELIZABETH, N.J.

SCALE: 1"= 2000'

FIGURE 1

NUS CORPORATION

Jersey Department of Transportation (NJDOT) to widen the viaduct. The TAMS investigation did not include screening of the entire site. Refer to Reference No. 3, Figure 2 for the locations of the borings and test pits.

TAMS reported little visual evidence of coal gasification wastes to be present in these borings and test pits, with the exception of some subsurface retort slag. However, every soil sample tested exceeded the New Jersey Department of Environmental Protection informal action levels for at least one parameter. The inorganics exceeding action levels included cadmium, lead, and cyanide. Inorganic analyses are presented in Reference No. 3, Table 1. The most significant concentrations of organic contaminants detected were for PAHs, ranging from over 40 parts per million (ppm) to 3,090 ppm in eight of the twelve samples taken. High concentrations of other semivolatile organic (dibenzofuran and naphthalenes) and inorganic (lead) compounds were detected in association with the high PAH concentrations. Reference No. 3, Table 2 presents organic analysis results (Ref. No. 3).

PART IV: SITE INSPECTION SAMPLE RESULTS

The NUS Corporation Region 2 FIT (FIT) conducted a sampling site inspection at the Elizabeth Coal Gas Site #2 on June 12, 1990, during which seven surface and seven subsurface soil samples were collected (Ref. No. 2). The soil samples were collected to determine if any soil contamination or waste exists that can be attributed to previous coal gasification operations and to assess the potential for direct contact with contaminants present. The samples were analyzed under the Contract Laboratory Program(CLP) for Target Compound List (TCL) organic and inorganic constituents, including cyanide. All NUS Corporation Region 2 FIT analytical data sheets are provided in Ref. No. 27 of this report. Refer to Figure 4 for all sample locations and to Table 1 for a summary of the organic compounds detected in the soil samples. In the following discussion, all soil sample numbers are preceded by NJGA .

The site can be divided into two sections: the northern portion of the site occupied by Vignola Salvage Corp. and the southern portion owned by Union County. The northern portion of the site was previously sampled by TAMS Consultants, Inc and the data are summarized above. The FIT collected 13 surface and subsurface soil samples (S1 to S13), including a duplicate, from the southern portion of the site, and one surface soil sample (S14) from a residential property, located on the south side of High Street, to serve as a background sample. Sample locations were determined by using a thin-walled tube sampler at random subsurface locations around the site and marking the areas where waste was encountered and/or where readings significantly above background were registered on the HNU or OVA air monitoring instruments. No visual waste was encountered while using the tube sampler to determine the actual sample locations; however elevated readings

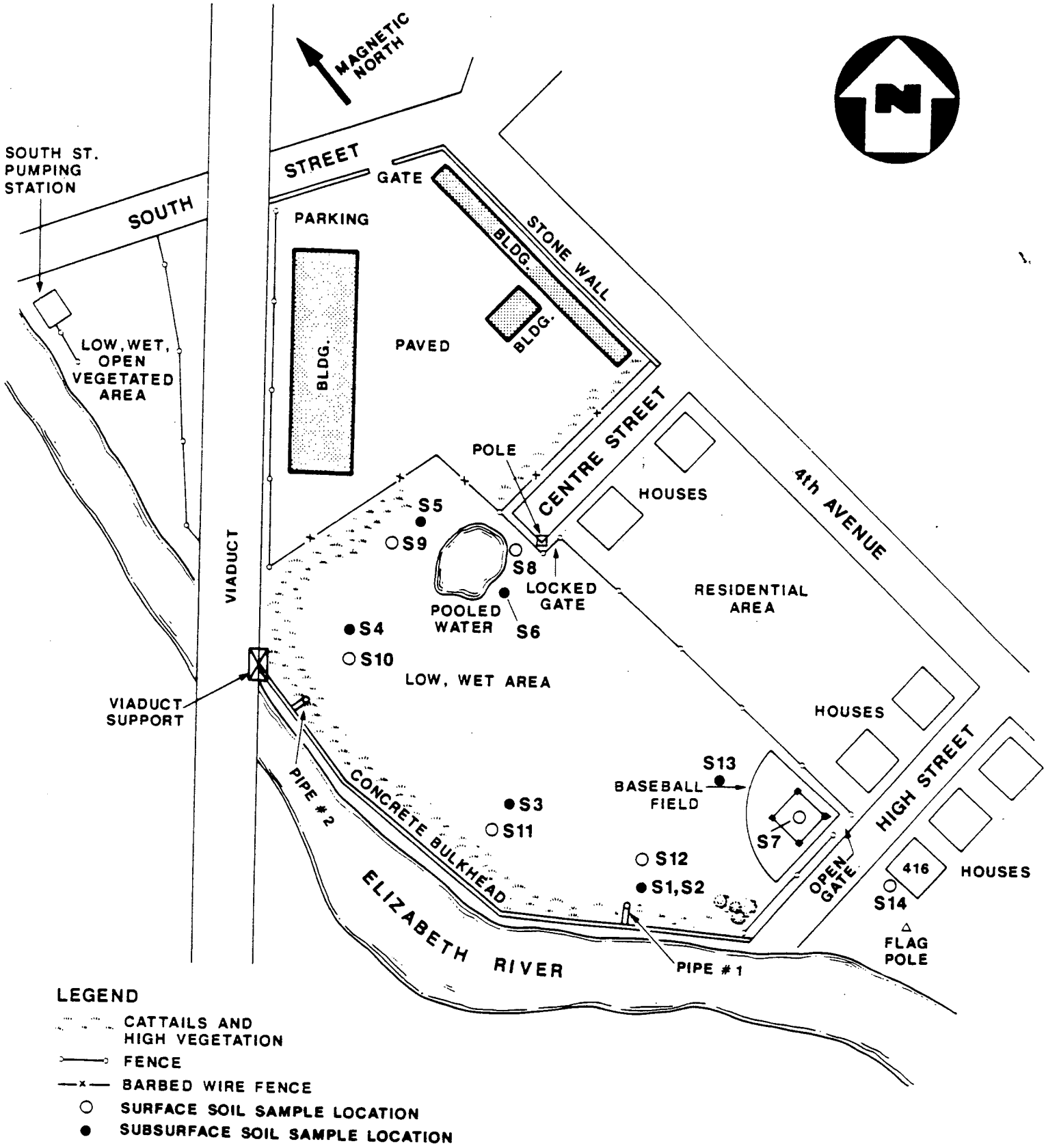
registered on the OVA in every hole made with the tube sampler at depths ranging from 0 to 48 inches. Samples were collected in pairs at each location: one surface soil sample and one subsurface vertical composite soil sample (Ref. No. 2).

A substance assumed to be solidfied coal tar was encountered in soil sample S5 at a depth of approximately 18 to 36 inches. Analytical results from a sample of this material show elevated concentrations of volatile organic compounds associated with coal gasification. Estimated concentrations of carbon disulfide (10,000 micrograms per kilogram [ug/kg]), benzene (82,000 ug/kg) , toluene (59,000 ug/kg), styrene (14,000 ug/kg), and total xylenes (68,000 ug/kg) were detected in this sample. Acetone was detected in sample S2 at an estimated concentration of 150 ug/kg. Benzene was detected in sample S7 at a concentration of 7 ug/kg and total xylenes were detected at 25 ug/kg in sample S4 (Ref. Nos. 2, 27).

Semivolatile organic analyses indicate that on-site soils contain notable concentrations of anthracene (12,000 ug/kg [estimated] to 2,900,000 ug/kg) in comparison to the background level (which was below the Contract Required Quantitation Limit [CRQL] of 388 ug/kg). Several soil samples contained notable concentrations of chrysene, which ranged from 22,000 ug/kg to an estimated 2,800,000 ug/kg, (compared to a background concentration of 5,400 ug/kg), and of numerous other semivolatile organic compounds, including several PAHs. The highest concentrations of these compounds, which include fluoranthenes, pyrenes, naphthalenes, and dibenzofuran, were detected in soil sample S5, ranging from an estimated 140,000 ug/kg to an estimated 3,300,000 ug/kg. PAHs were found in the intended background sample S14 at concentrations ranging from 940 ug/kg to 10,000 ug/kg (Ref No. 27).

The only pesticide detected was 4,4'-DDT, which was found in soil samples S8 and S9 at concentrations of 230 ug/kg and an estimated 220 ug/kg, respectively. No other pesticides and no polychlorinated biphenyls (PCBs) were detected in any soil samples. Cyanide was detected only in soil sample S8, at a concentration of 2.2 milligrams per kilogram (mg /kg).

Various inorganic constituents were detected in all soil samples, including notable concentrations of arsenic in soil samples S1 (29.2 mg/kg) and S2 (22.5mg/kg), chromium in soil sample S14 (estimated 489 mg/kg), and copper in soil sample S11 (estimated 269 mg/kg). Lead was also detected at concentrations ranging from an estimated 9.3 mg/kg to 362 mg/kg. These inorganic constituents cannot be directly attributed to coal gasification processes (Ref. Nos. 1, 2, 27), although the levels of arsenic and copper in on-site soils are over 3 and 4 times higher, respectively, than those found in the background sample. All other inorganic constituents were present in on-site soils at levels comparable to each other and/or to the background level.



SAMPLE LOCATION MAP

ELIZABETH COAL GAS SITE #2, ELIZABETH, N.J.

NOT TO SCALE

FIGURE 4

NUS CORPORATION

TABLE 1: SUMMARY OF ORGANIC COMPOUNDS DETECTED IN SOIL SAMPLES COLLECTED AT THE ELIZABETH COAL GAS SITE #2 BY THE NUS CORP. REGION 2 FIT ON JUNE 12, 1990

COMPOUND	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
VOLATILES														
Carbon Disulfide	J	J	ND	ND	10,000E	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	J	82,000E	ND	7	J	J	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	59,000E	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	14,000E	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	25	68,000E	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEMIVOLATILES														
Naphthalene	J	J	J	2,200	270,000E	ND	J	950	1,300	J	J	J	ND	J
2-Methylnaphthalene	J	J	J	J	3,300,000E	ND	ND	J	J	J	J	J	ND	J
Acenaphthylene	J	J	J	3,600	2,600,000E	ND	J	2,300	3,700	2,100	990	J	ND	J
Acenaphthene	J	850	J	1,100	460,000E	ND	J	J	J	J	J	J	ND	J
Dibenzofuran	J	J	J	ND	2,300,000E	ND	ND	J	860	J	J	J	ND	J
Phenanthrene	2,900	5,300	3,600	44,000	220,000E	ND	740	11,000	20,000	7,900	5,200	3,700E	ND	10,000
Anthracene	1,300	2,800	1,300	7,600	2,900,000E	ND	J	3,800	5,200	1,700	1,300	1,200E	ND	J
Flouranthene	7,700	11,000	8,400	140,000	140,000E	ND	2,300	27,000	34,000	12,000	12,000E	7,900E	J	9,600
Pyrene	7,800	10,000	8,600	140,000	140,000E	ND	2,900	26,000	32,000	9,200	8,400	5,700E	ND	8,800
Fluorene	J	J	J	2,200	2,500,000E	ND	ND	1,400	1,700	J	J	J	ND	J

Notes:

All results reported in ug/kg
E = Estimated Value
ND = Not Detected
J = Estimated value, compound present below CRQL but above IDL

Ref. No. 27

TABLE 1: SUMMARY OF ORGANIC COMPOUNDS DETECTED IN SOIL SAMPLES COLLECTED AT THE ELIZABETH COAL GAS SITE #2 BY THE NUS CORP. REGION 2 FIT ON JUNE 12, 1990 (CONT'D)

COMPOUND														
SEMIVOLATILES (CONT'D)	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
Benzo(a)anthracene	5,900	7,200	5,600	74,000	2,500,000E	ND	1,600	14,000	16,000	12,000	7,100	3,600E	ND	3,600
Chrysene	5,400	7,800	5,800	140,000	2,800,000E	ND	1,500	22,000	27,000	12,000	9,200	4,400E	ND	5,400
Benzo(b)fluoranthene	4,900	5,300	4,600	82,000	1,500,000E	ND	1,700	14,000	16,000	16,000E	8,400	5,100E	ND	5,000
Benzo(k)fluoranthene	2,900	3,800	3,200	ND	1,400,000E	ND	ND	7,600	ND	ND	3,800	2,500E	ND	ND
Benzo(a)pyrene	3,700	3,700	3,100	94,000	1,900,000E	ND	1,200	9,600	4,100	9,000	6,100	3,600E	ND	3,300
Indeno(1,2,3-cd)pyrene	3,200	3,200	2,800	73,000	1,000,000E	ND	1,000	8,700	8,900	8,200	5,200	2,700E	ND	2,500
Dibez(a,h)anthracene	1,900	1,700	1,700	11,000	570,000E	ND	J	6,000	5,100	3,500	2,200	1,100E	ND	940
Benzo(g,h,i)perylene	2,800	2,800	2,500	57,000	870,000E	ND	830	8,400	8,000	8,400	3,900	2,100E	ND	3,000
PESTICIDES														
4,4'-DDT	ND	ND	ND	ND	ND	ND	ND	230	220E	J	J	ND	ND	J

Notes:

All results reported in ug/kg.
E = Estimated Value
ND = Not Detected
J = Estimated value, compound present below CRQL but above IDL

Ref No 27